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AESTRACT

This investigation is an empirical attempt to locate variables which best predict individual modernity and to explicate causal relationships. The dimensions chosen for analysis are defined by several relevant models in past research. The independent variables include two personal characteristics (age and sex); five structural variables (residence, SES, organizational participation, religion, and exposure to the mass media of communications); and four social psychological variables (identification with community, individualism, familism, and fatalism). The dependent variable is individual modernity. An area in eastern Kentucky, a traditional society in the process of modernization, is chosen as a source for data. A research model is designed, analyzed, and revised. The authors suggest that the variables shown in the revised model may provide a good empirical base for theoretical formation. (Author/SHM)

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VALUE DIMENSIONS VERSUS SOCIAL INDICATORS AS PREDICTORS OF INDIVIDUAL MODERNITY

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The idea for this paper comes from two sources. First, the continuing struggle among modernization researchers about what variables best predict individual modernity; be they social structural variables or social psychological variables (attitudinal and cognitive variables) and secondly, a suggestion in the conclusion of Roger's Modernization Among Peasants (1969) that an analytical procedure which takes account of the time dimension might best be applied to the multitude of variables thought to cause individual modernity.

The paper is mainly empirical, with the hope that the results of the analysis will give future researchers an empirically grounded orientation in constructing theory. The plan is simply to include both structural variable and social psychological dimensions in a causal model in order to determine which measures yield the best substantive result.

STRUCTURAL VERSUS SOCIAL PSYCHOLOGICAL DIMENSIONS

Most researchers and theorists postulate a temporal model with preconditions or antecedents leading to a process (intervening conditions) which yields a consequence. In all cases the consequence, which may be one or a cluster of variables, equals the authors definition of modernity. A typical model might postulate structural elements as preconditions and value dimensions as the end product or the "modern man."

Because modernization models tend to be fairly simplistic upon first inspection, it is often difficult to pin down specific writers on which variables are most important. A typical statement being that "one type of variable is more important," with a caution that "the other type should

certainly not be discounted." Nevertheless, a review of the literature concludes that Kahl (1968), Moore (1963), Lerner (1964) and Inkeles (1969) take the position that structural variables such as SES, literacy[1], residence and urban experiences, like factory work, is what makes men modern. On the other side researchers such as Coughenour and Stephenson (1972), Hagen (1962), Rogers (1969) and McClelland (1961) argue that individual modernity is brought about by changes in values, as man moves from a traditional to more modern state. Table 1 illustrates the postulated models and important theoretical dimensions of some of the major modernization theories.

(Enter Table 1 about here)

Each side of the issues invokes certain sociological appeal. SES, the main structural variable, is the sociologists stock in trade. High socio-economic status has been shown to be associated with positive factors deemed important for modernization. On the other hand a case may be made for social psychological dimensions. Studies of non-modern men tend to focus on samples of homogenous occupation groups, with similiar literacy rates and income levels. It is suggested that what differentiates persons of similiar backgrounds is receptivity to modern values.

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[1]As measured in the more developed nations literacy is a component of SES, while in less developed countries research treats literacy as a seperate indicator. Generally, literates are seperated from functional illiterates for analytical purposes.

TABLE 1

MODELS OF INDIVIDUAL MODERNIZATION

I. Structural (Inkeles, 1969)

Education
Industrial Work → Affects → Values, Attitudes, Beliefs → Affects → Overt Modern Behavior

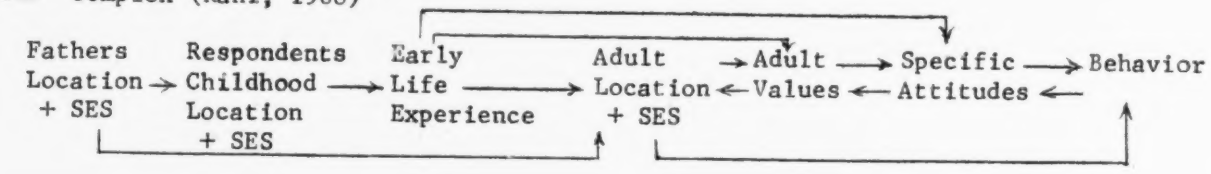
II. Social Psychological (Rogers, 1969)

Antecedents	*	Intervening	*	Consequences
Literacy		Empathy		Innovativeness
Mass Media Exposure		Achievement Motivation		Political Knowledge
Cosmopoliteness		Fatalism		Aspirations

IIIa Complex (Moore, 1963)

Preconditions	Process	Consequences
Values		Economic Organization
Institutions		Demographic Structure
Organization	Industrialization	Ecological Structure
Motivation		Values
Economic System		Norms
		Institutions

IIIb Complex (Kahl, 1968)



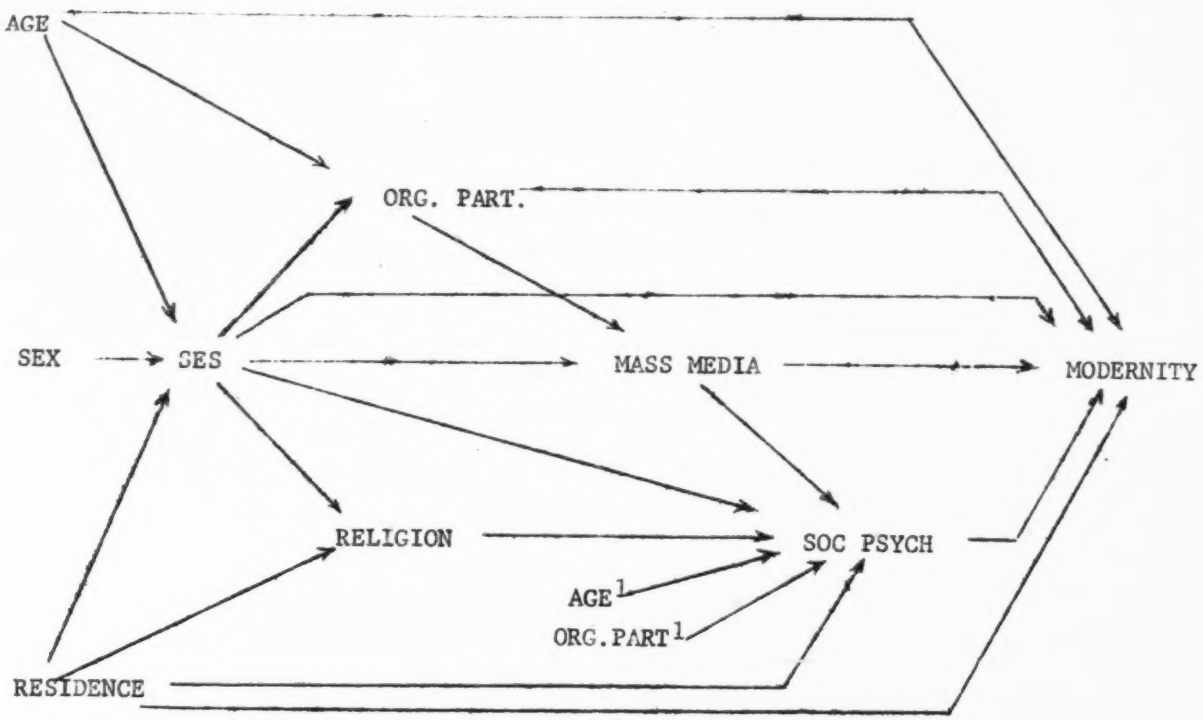
*Indicates passage of time, NOT causality.

THE PRESENT MODEL

As previously pointed out, this investigation is an empirical attempt to locate variables which best predict individual modernity and to explicate attending causal relationships. Dimensions chosen for analysis include items listed in Table 1 and several others that have been demonstrated as relevant by past research. The independent variables include two personal characteristics, age and sex; five structural variables, residence, SES, organizational participation, religion, and exposure to the mass media of communication; and four social psychological variables, identification with community, individualism, familism and fatalism. The dependent variable is, of course, individual modernity.

The hypothesized causal relationships between these variables is shown in Figure 1.

FIGURE 1 - PATH MODEL WITH HYPOTHESIZED CAUSAL RELATIONSHIPS



1 Same variable as in upper left of model placed here for graphic clarity.

SOURCE AND RATIONALE OF DATA

Since the focus of the paper is the process of modernization, we chose as a source for data a traditional society becoming modern. Johnson County located in Eastern Kentucky is such an area. The traditional nature of this Appalachian region has been well documented by Ford (1962), Caudill (1963) and Weller (1965). The region also includes many of the characteristics the United Nations uses to classify underdeveloped areas (Korsching, 1972).

The sample consisted of 400 adult residents of Johnson County between the ages of 18 and 60. The technique utilized to select respondents was cluster sampling of both the rural and urban populations with random procedures interjected at each stage to insure representativeness. These data were obtained by personal interviews from structured questionnaires (Becker, 1971).

INDEPENDENT VARIABLES

The independent variables include two personal characteristics, age and sex; five structural variables, residence, socioeconomic status, organizational participation, religion, and exposure to the mass media of communication[2]; and four social psychological variables which include responses to attitude scales.

The measurement of age and sex was conventional. Socioeconomic status was measured by a composite scale combining U.S. Census occupation categories, years of formal education and family income. Organizational participation was measured with a summated scale of membership in formal organizations with

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[2]Exposure to the mass media of communication is here classed as a structural variable although exposure to it might be considered a matter of personal choice. However, Korsching and Burdge (1972) have shown that mass media exposure is largely determined by the socioeconomic level of the respondent.

appropriate weightings for intensity of participation. Residence was here measured as the number of years the respondent had lived in Johnson County.

Data on religion was scored on the basis of stated religious preference. The responses were categorized according to the degree of institutionalization of each denomination. A higher score meant the respondents denomination was less institutionalized (Burdge, 1961). 1) Lutheran, Presbyterian, Roman Catholic; 2) Methodist, Christian Church; 3)Baptist; 4) Church of God, Advent, Jehovah's Witness, Holiness, Pentocostal.

Exposure to the mass media of communication was measured with a weighted scale constructed from the content of the respondent's television and newspaper exposure. Research has shown (Donohew, 1967:635 and Korsching and Burdge, 1972:11) that exposure to informational as opposed to entertaining or other type of content has a stronger effect in promoting individual modernity. Therefore, higher weights were given to the types of exposure with greater informational content.

Finally, the social psychological variables were operationalized on the basis of responses to attitude scales. The four variables selected were identification with community, individualism, familism, and fatalism, all of which the literature has shown to be negatively associated with individual modernity (Rogers, 1969; Kahl, 1968; Lerner, 1964; Inkeles, 1969; Becker, 1971). To ascertain unidimensionality and validity, the scales were subjected to Guttman scale analysis. Each scale was reduced to five items from an original list of eight or nine. The coefficients of reproducibility for the scales were identification with community .97, individualism .91, familism .91 and fatalism .94.

DEPENDENT VARIABLE

Individual modernity was also measured by an attitude scale. This scale was developed by Stephenson (1968) for the Appalachian region and was considered applicable for the present sample. Guttman scaling procedures yielded a five item scale with a .92 coefficient of reproducibility.

RESULTS OF ANALYSIS

The main analytical device used in this research was path analysis.[3] Figure 1 shows the basic path model with arrows representing hypothesized causal relationships. Following the theoretical orientation outlined previously the social psychological dimensions were placed in the causal chain immediately preceding modernism - the main dependent variable.

Testing of the model shown in figure 1 will begin by substituting each of the four value dimensions into the social psychological component of the model. However, before proceeding with the tests it must be established that the four independent attitude scales do not measure the same dimension as modernism. If these value scales were found to measure the same dimension a confounding and distortion of the true relationships could occur.

In order to establish that the modernism scale was measuring a dimension separate from the other four scales, all five scales were combined and subjected to factor analysis.[4] The results of the factor analysis suggest rather strongly t

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[3]The principles of path analysis may be found in Duncan (1966), Land (1969) and Blalock (1972).

[4]Seven factors emerged; the first five explaining 90.2 percent of the common-variance. Table 2, the varimax rotated factor matrix generally supports the independence of the modernism scale from the other four value scales. Identification with community is completely independent of modernism. Individualism and familism each have one item which overlaps and an assumption of relative independence seems safe, especially for individualism, with the one overlapping item having a low communality of .13. Fatalism was the least independent, with three items loading on the same factors as modernism. Although two items have low communality (.15 and .28) while one coefficient was relatively large (.41).

TABLE 2

VARIMIX ROTATED FACTOR MATRIX OF ATTITUDE SCALE ITEMS AND COMMUNALITY

Factor	1	2	3	4	5	6	7	Communality
Item								
Moder A		-.32						.12
Moder B		-.47						.24
Moder C		-.41						.41
Moder D					-.35			.21
Moder E					-.37			.15
Comid A	.72							.56
Comid B	.39							.25
Comid C	.64							.44
Comid D	.62							.45
Comid E	.83							.74
Indiv A			.45					.29
Indiv B			.50					.27
Indiv C			.52					.29
Indiv D		-.28						.13
Indiv E			.47					.29
Famil A							.50	.33
Famil B					.48			.44
Famil C							.36	.21
Famil D						.57		.36
Famil E						.56		.50
Fatal A		.56						.41
Fatal B					.33			.15
Fatal C		.41						.28
Fatal D				.54				.42
Fatal E				.83				.76

the attitude scales do represent seperate dimensions.

THE PATH MODELS

Figures 2, 3, 4 and 5 show the hypothesized model with specific variables and path coefficients. The zero order correlation coefficients among the variables are listed in Table 3.

The coefficients shown in the models indicate that of the social psychological variables only fatalism has a direct path to modernity which is the largest direct path (-.32) to modernity in its model. Individualism (-.13) and identification with community (-.12) are both significant but rank fourth and third respectively. Familism (-.04) does not show a significant path. Except for the model with the fatalism scale, in which SES has a direct effect of .16, SES has the strongest direct effect (.23, .24 and .22) of all variables. The strength of the SES variable is not surprising, for Kahl (1968) contends that the most consistent predictor of modernity is SES. As expected, mass media exposure and years lived in Johnson County are also relatively strong. As stated earlier, exposure to mass media tends to act as a modernizing agent. Also, Lerner (1964) states that urbanization is a primary factor in the modernization process, and our data yield a significant negative correlation (-.18)[5] between years lived in Johnson County and years lived in an urban place of 2,500 population.

Thus far the analysis supports the primacy of structural variables. The four social psychological variables which affect modernism were largely determined by the three structural variables residence, SES, and exposure to mass media along with the personal characteristic age. However, some of the other relationships were not quite as clear or supportive.

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[5]This correlation coefficient is not presented in Table 3.

Religious preference has almost no effect on the social psychological variables except with respect to identification with community (.14). This lack of effect is most likely a function of the homogenous denominational affiliation of the Johnson County sample. Table 4 shows that the sample was 60 percent Baptist with very heterogeneous SES scores. A different denominational mix could produce different relationships with the dependent variable.

Organizational participation's negative effect on modernity may be attributed to the types of organizations present in Johnson County. Most tend to be conservative and traditionalistic in orientation. Furthermore, the strong effect of age on organizational participation has a mediating influence on the effect of SES. This produces the unanticipated negative relationship between organizational participation and modernism.

Finally, the negative effect of age on identification with community (-.09) was unanticipated. Age should be positively related to what Rogers (1969:37) terms localiteness or "the degree to which individuals are oriented within, rather than external to, their social system." Our finding may be due to the unique characteristics of the Johnson County and Appalachian population. Approximately 60 percent of the present sample is between the ages of 40 and 60, with the median in the 40 to 44 range. It is probable that this group of respondents, being 20 through 40 in the early 1950s, had already established their positions in the community with families, occupation, etc. when the large exodus from Appalachia began. They were thus able, indeed forced, to witness the outmigration of the younger generation to a "better life," and yet unable, because of various factors, to do likewise. Thus the desire to leave combined with the inability to leave may have produced a superficial attachment to the community.

TABLE 3

ZERO ORDER CORRELATION COEFFICIENTS AMONG VARIABLES

	2	3	4	5	6	7	8	9	10	11	12
1 Sex	-.04	-.08	.02	.19**	.01	-.03	-.08	-.07	.07	.01	.10*
2 Residence		-.13**	.66**	.14**	.03	.10*	-.23**	.34**	-.08	.22**	.17**
3 SES			-.32**	-.17**	.40**	.34**	.33**	-.15**	.02	-.31**	-.34**
4 Age				.15**	.11*	.19**	-.17**	.19**	-.13**	.21**	.14**
5 Religion					.09	-.08	-.15**	.19**	.01	.09	.09
6 Organizational Participation						.27**	.05	.05	-.03	-.04	-.16**
7 Mass Media Exposure							-.21**	.05	-.13**	-.14**	-.25**
8 Modernity								.25**	-.03	-.17**	.14**
9 Community Identification									-.02	.25**	.25**
10 Individualism										-.03	.13**
11 Familism											.14**
12 Fatalism											

* Significant at .05 level
** Significant at .01 level

FIGURE 2 - PATH MODEL WITH COMMUNITY IDENTIFICATION SCALE

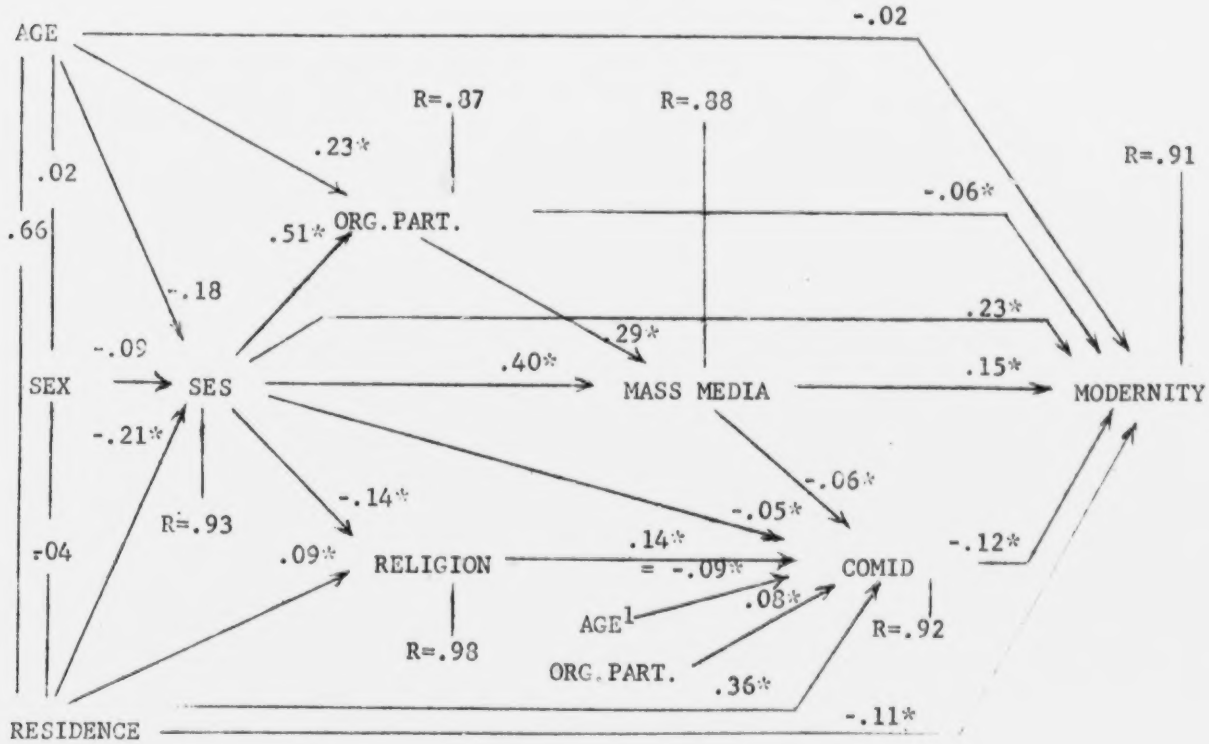
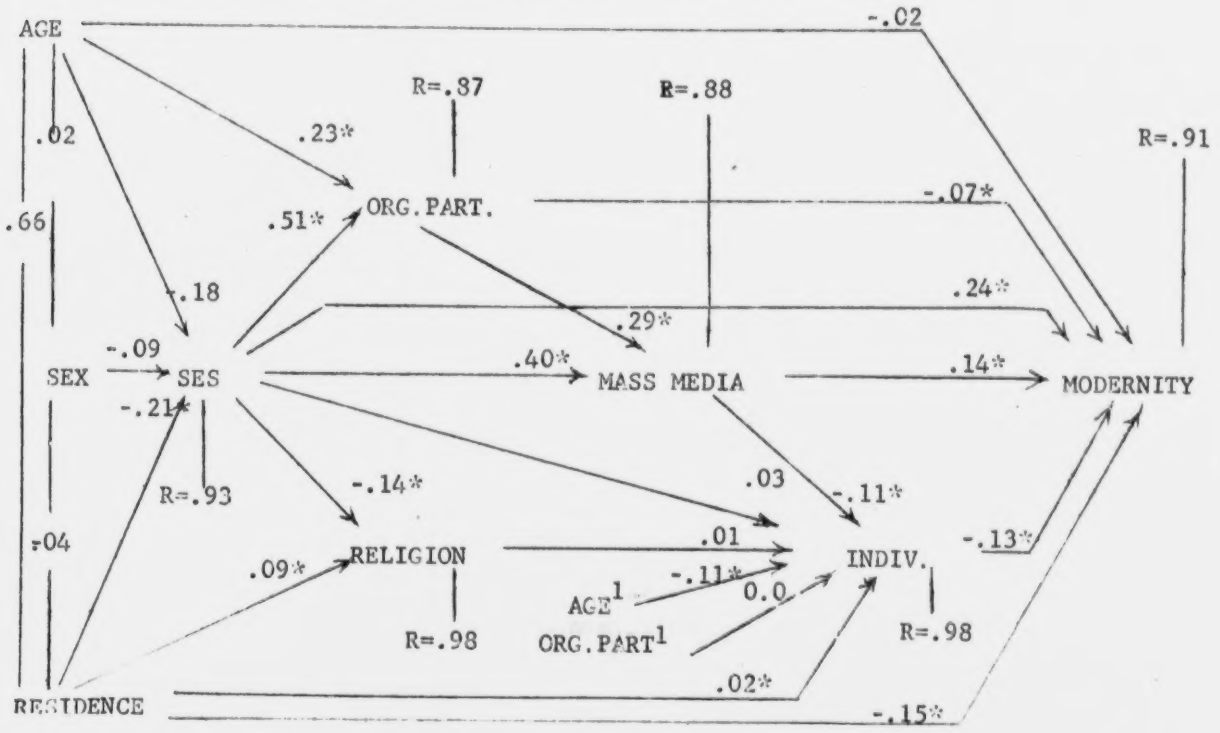


FIGURE 3 - PATH MODEL WITH INDIVIDUALISM SCALE



*Significant path coefficient

R Residual path coefficient

1 Same variable as in upper left of model. Placed here for graphic clarity

FIGURE 4 - PATH MODEL WITH FAMILISM SCALE

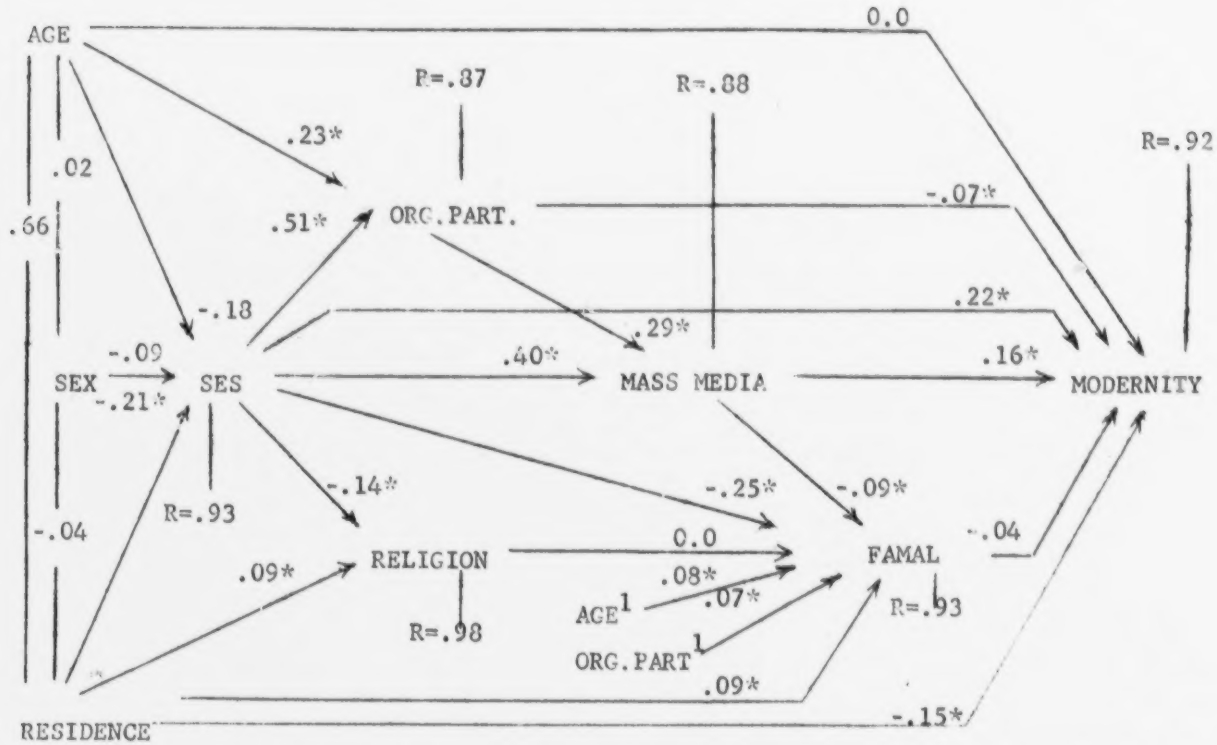
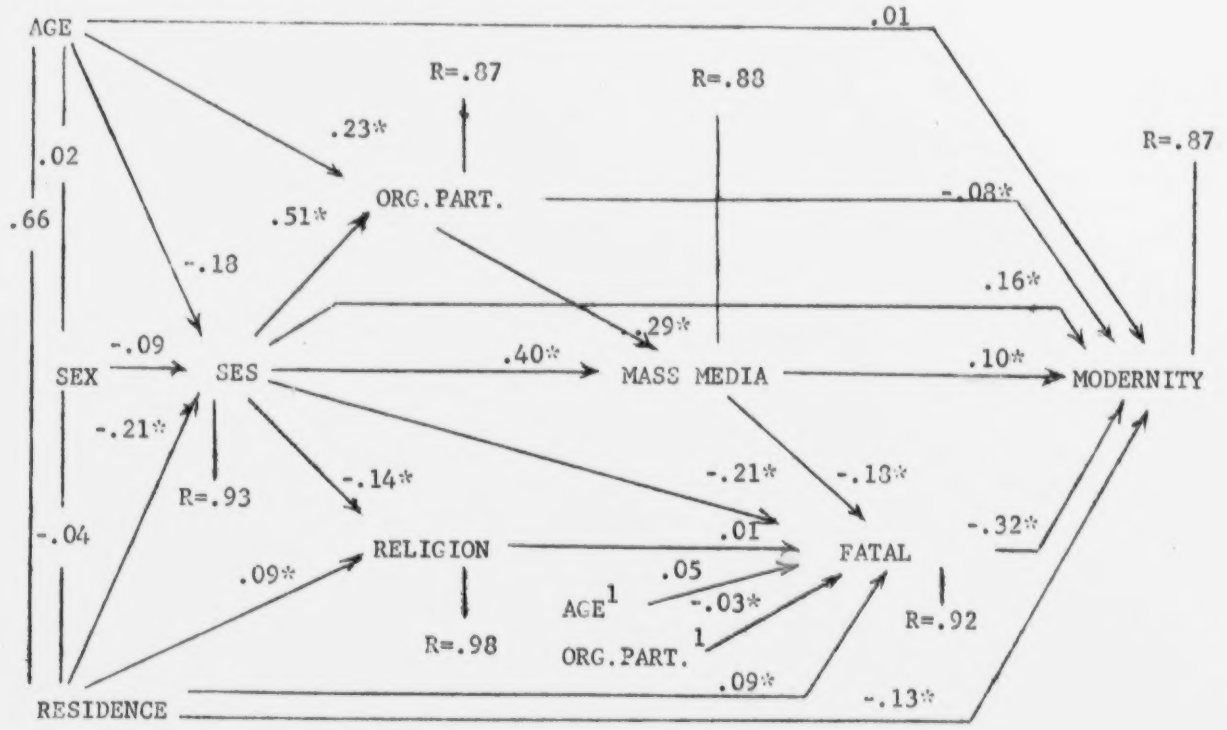


FIGURE 5 - PATH MODEL WITH FATALISM SCALE



*Significant path coefficient
R Residual path coefficient
1 Same variable as in upper left of model. Placed here for graphic clarity

TABLE 4

DISTRIBUTION OF BAPTISTS BY COMBINED (INCOME, EDUCATION AND OCCUPATION) SES INDEX

SES Index	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Baptist	6	4	11	20	18	22	35	18	22	16	17	9	15	5
Percent	.02	.01	.04	.08	.07	.09	.14	.07	.09	.06	.07	.03	.06	.02

SES Index	15	16	17	18	19	20
Baptist	5	7	4	4	1	1
Percent	.02	.02	.01	.01	.00	.00

Total = 240[1]

[1]Represents 60% of Total Sample N = 400.

EVALUATING THE MODEL

One of the problems of path analysis is evaluating the model (Heise, 1969 and Land, 1969).[6] The present researchers suggest that the significance of the path coefficient be used in conjunction with the R^2 coefficient of a specific independent variable on a specific dependent variable. This procedure provides additional rational for the inclusion or deletion of specific paths and variables in terms of the amount of variation a component explains. Of course, a cutting point must be assigned below which additional variation explained is considered insignificant.

For the present analysis, any independent variable which did not add a minimum of 1 percent additional variation explained and did not have a path coefficient statistically significant in relation to a specific dependent variable was deleted as a determinant of that variable. Table 5 is a summary of the four models indicating which independent variables met the above criteria for determinants of dependent variables, the frequency (one possibility for each model) that it appeared as a determinant, and the position of each appearance in respect to the order of the stepwise regression. The results shown in table 5 clearly indicate that some revision in the model was necessary Sex is completely missing as a variable and religious preference and organizational participation are present only as dependent variables. Age only affects two variables and one of the social psychological variables (individualism).

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[6]The normal criterion, the significance of path coefficients, is largely a function of the size of sample; large samples may yield smaller significant coefficients and small samples may yield large insignificant coefficients.

TABLE 5

FRE UENCY OF VARIABLES WITH EXPLANATORY POWER[1] APPEARING IN MODELS

DEPENDENT VARIABLES / INDEPENDENT VARIABLES	SES	RELIGP	ORGPART	TVNEW	SOCPSYCH	MODERNITY
	LVJOCO F = 4 P = 1,1,1,1	SES F = 4 P = 1,1,1,1	SES F = 4 P = 1,1,1,1	SES F = 4 P = 1,1,1,1	LVJOCO F = 3 P = 1,2,3	SES F = 4 P = 1,1,1,2
	AGE F = 4 P = 2,2,2,2		AGE F = 4 P = 2,2,2,2	AGE F = 4 P = 2,2,2,2	SES F = 2 P = 1,1	LVJOCO F = 4 P = 2,3,3,4
					TVNEW F = 2 P = 2,2	SOCPSYCH F = 3 P = 1,2,2
					AGE F = 1 P = 1	TVNEW F = 3 P = 3,3,4

F Frequency the variable appeared as a determinant of the dependent variable in the four models.

P Position of the appearance in respect to the order of the stepwise regression used for the path analysis.

[1] Only variables explaining at least one percent of the variation and statistically significant were included.

THE REVISED MODEL

The revised model is shown in Figures 6, 7, 8 and 9. This model, with fewer but more relevant variables, has a better fit with the data as indicated by the significance of most of the path coefficients. Sex, religion, and organizational participation have been completely deleted from the model. The path from age to SES has been deleted, but a new path has been added from age to residence, since years lived in Johnson County is obviously a function of age. The paths from age to the social psychological variables, except for individualism, have also been deleted.

The revised model lends additional support that structural variables are greater determinants of individual modernity than social psychological variables. As before, only in the diagram with fatalism does the social psychological variable have the largest direct effect on modernity. In the other three, it has the smallest direct effect with familism being insignificant.

FIGURE 6 - REVISED PATH MODEL WITH COMMUNITY IDENTIFICATION SCALE

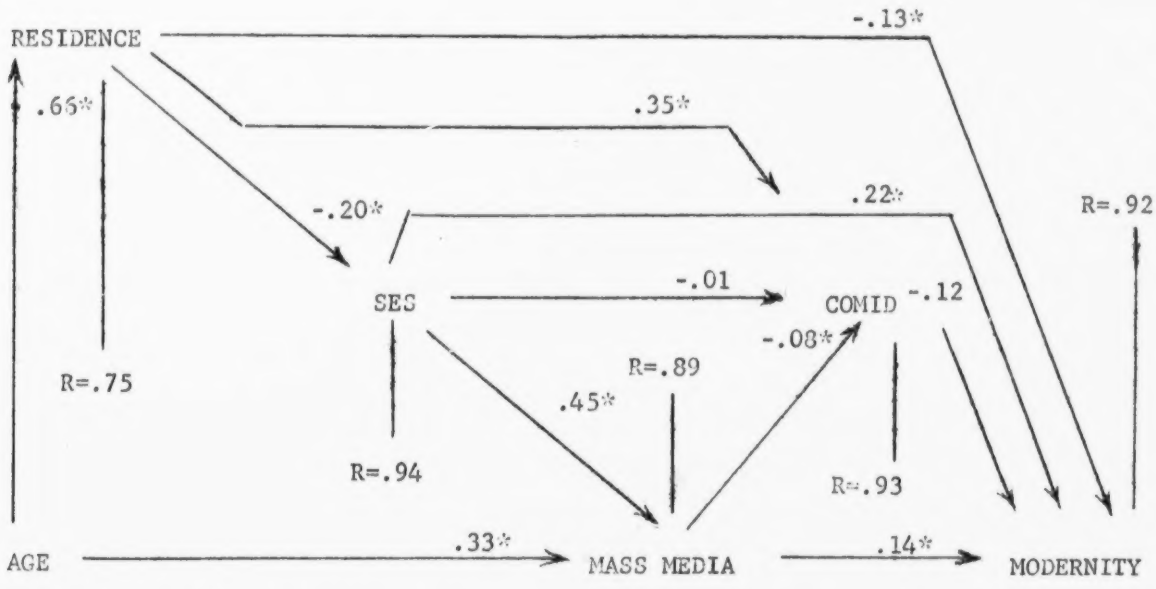
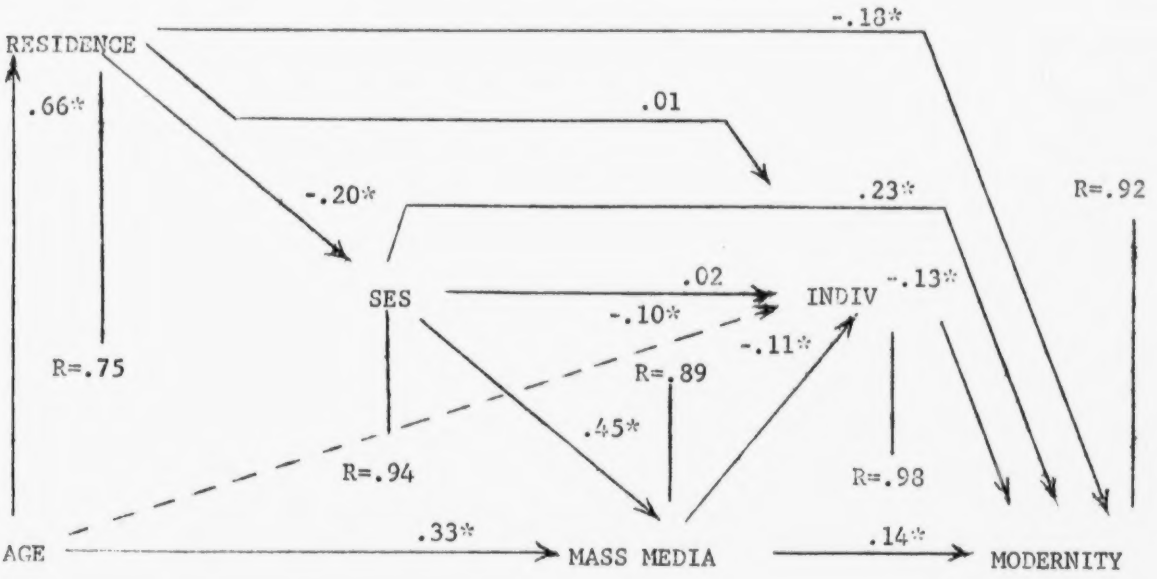


FIGURE 7 - REVISED PATH MODEL WITH INDIVIDUALISM SCALE



*Significant path coefficient
R Residual path coefficient

FIGURE 8 - REVISED PATH MODEL WITH FAMILISM SCALE

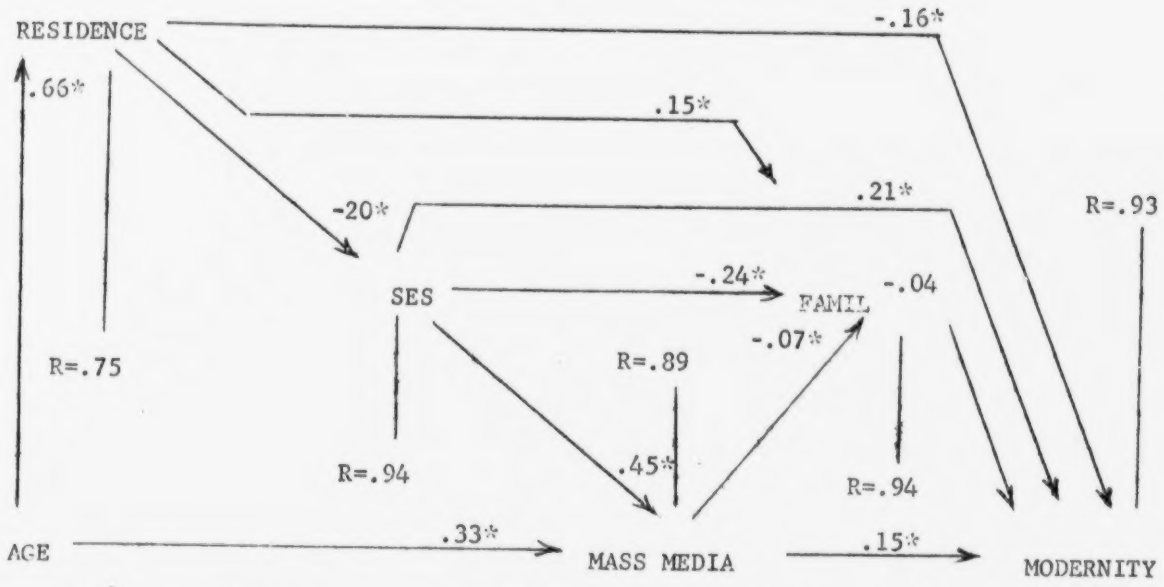
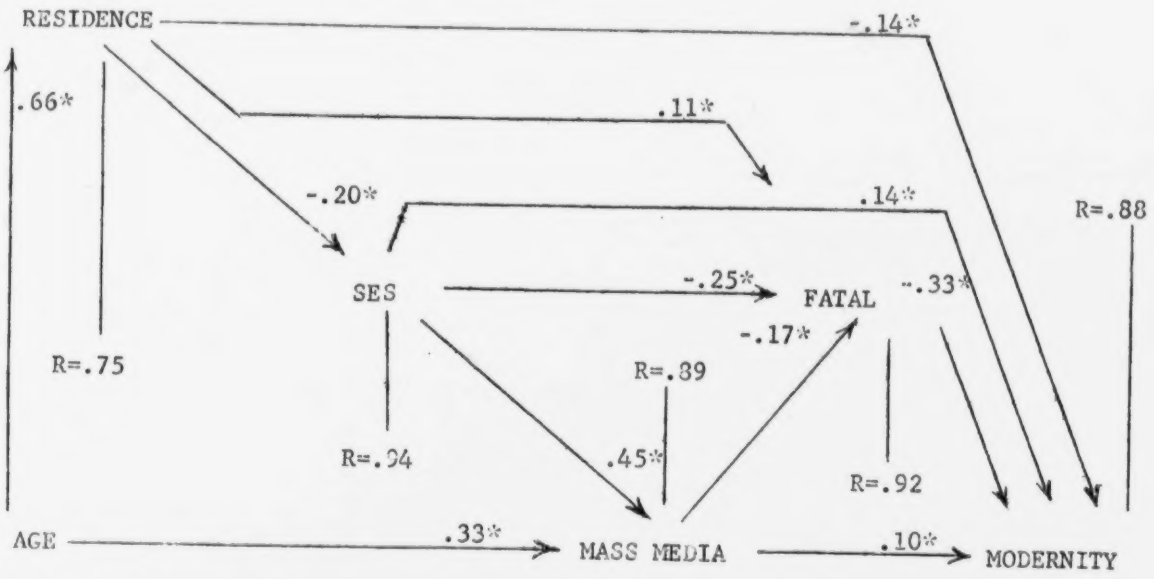


FIGURE 9 - REVISED PATH MODEL WITH FATALISM SCALE



*Significant path coefficient
R Residual path coefficient

SUMMARY AND IMPLICATION

The purpose of this paper was to compare social structure and social psychological dimensions in an effort to achieve some pasimony in the selection of variables which predict and explain individual modernity. Social psychological dimensions included fatalism, familism, individualism and identification with community. These dimensions were placed adjacent to the dependent variable modernity in the model. The structural variables included SES, residence, organizational and religious participation and mass media exposure. The latter dimension was labeled as structural because of its strong association with other structural variables. Personal characteristics included age and sex.

The results of the Path Analysis suggest in general that the structural variables were more important in predicting and explaining modernity. The one exception being the value dimension fatalism.

Organizational and religious participation did not prove to be strong predictors of modernity. However, the nature of the population with homogenous religious affiliation and the presence of voluntary associations which emphasize the status quo may have accounted for the loss of these variables.

Sex of the respondent did not show up in any of the regression procedures on the path model.

Age was, of course, highly correlated with length of residence in Johnson County and did operate directly to individual modernity, but only through other structural variables.

The research has shown that social psychological dimensions can not be completely eliminated from any model that hopes to explain the process by

which men become modern. On the other hand these value dimensions are not central, but must be thought of as modifying the effects of the structural variables in the process of modernization.

The present research was partially exploratory, but did attempt to utilize variables that had been suggested in other modernization schemes. However, we chose only variables which were well established and have been shown to have good epistemic correlation. Therefore, we suggest that the variables shown in the revised model may provide a good empirical base for theoretical formulation.

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